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# Descriptions of new Tephritidae (Diptera) from Israel. I*

by

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The following six new species and one new subspecies of Tephritidae from Israel are described together with notes on their host plants, as far as available: *Urophora hermonis* bred from *Cousinia hermonis* Boiss. (Compositae); *Isoconia negeviana* bred from *Blepharis attenuata* Napper (Acanthaceae); *Oxyna superflava; Euarestella kugleri* bred from *Iphiona scabra* DC. (Compositae); *Tephritis cometa israelis* bred from *Cirsium gaillardoti* Boiss. (Compositae); *Trupanea erigeroni* bred from *Erigeron bovei* (DC.) Boiss. (Compositae) and *Trupanea pseudoamoena.*

## INTRODUCTION

The fauna of Israel includes elements of different zoogeographical regions. In most groups the Palaearctic element predominate, but the relative importance of the Ethiopian element varies according to the group.

The fruit-fly (Tephritidae) fauna of Israel has been intensively investigated since 1969; 75 species have already been recorded (Kugler and Freidberg, in press), 63 of which are known species. Five or six species are Ethiopian, with their northernmost border of distribution in Israel or southern Europe. By examining the new species, which have been collected until now from Israel only, one can only guess to which of the zoogeographical elements they are related. This guess may be supported by their affinities to known species and by their host plants.

In this paper six new species and one new subspecies are described. Four of these species probably have Ethiopian affinities: *Isoconia negeviana, Trupanea erigeroni, T. pseudoamoena* and *Euarestella kugleri*, and the other three, *Tephritis cometa israelis, Oxyna superflava* and *Urophora hermonis*, are probably Palearctic.

## MYOPITINAE

### ***Urophora hermonis*** spec. nov., figs 1, 9, 10.

MALE. length: 5,0–6,0 mm; wing: 4,0–5,0 mm.

*Head* (fig. 9): shining whitish to yellow, antennae, tip of palps and proboscis yellow, occiput black, margins whitish-yellow; bristles black, one upper, two lower orbitals; l:h:w (length:height:width) = 6,1:8,3:10,0; frons flat, 0,43 width of head, length as width; parafacials about $\frac{1}{3}$ width of antenna, genae 0,36 height of eye, which is about 1,4 higher than long; antennae 0,77 length of face, tip of third segment rounded; palps elongate, proboscis with hooked labella.

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*Thorax:* dorsum black, densely white dusted, pubescence black, rather coarse, bristles black; notopleural stripe forms together with the humerus a very broad yellow band, covering almost all of the posterior border of mesopleura, its upper part intrudes to the dorsum almost up to the presutural bristle, and forward more or less into the pronotum; rest of pleura black, lightly dusted. Scutellum yellow, corners and sometimes base infuscate or black. Legs: outer side of base of anterior and middle coxae, entire posterior coxae and basal half to two thirds of all femora black, the rest yellow; anterior femora at posterior-ventral side of distal half with 5–11 strong spines. Wings (fig. 1): stigma 2,5 times longer than wide; one or two setulae at knot of third vein, on the ventral side. No pattern; stigma yellowish, veins yellow; in the apical part, behind line of upper cross vein, brown-black; distal part of wing usually very slightly infuscate. Squamae white, halteres yellowish.

*Abdomen:* shining black, with no dust, pubescence and bristles black. Aedeagus (fig. 10) about 6 times as long as wide, very slightly sclerotized.

FEMALE. length: 8,0–9,0 mm; wing: 5,0 mm; ovipositor sheath: 4,0 mm.

Anterior femora with strong bristles instead of spines. Oviscape shining black, with black pubescence, 0,8 length of wing, two times length of pre-abdomen, basal third conical, the rest cylindrical.

MATERIAL EXAMINED. Holotype ♂, Allotype ♀ and Paratypes: 22 ♂♂, 6 ♀♀ Mt. Hermon at 2 000 m, 28.vi.1971. 8 ♂♂, 8 ♀♀ at the same locality, 21.vi.1971. 10 ♂♂, 10 ♀♀ reared from flower head galls of *Cousinia hermonis* Boiss. (Compositae), collected on Mt. Hermon, 2 000 m, on 22.v.1973. The flies emerged during the following two weeks. A pair of paratypes was sent to Dr H. K. Munro in the Plant Protection Research Institute, Pretoria, South Africa, and another to Mr B. H. Cogan in the British Museum (Nat. Hist.), Entomological Department. The holotype and all other paratypes are deposited in the entomological collection of the Tel Aviv University.

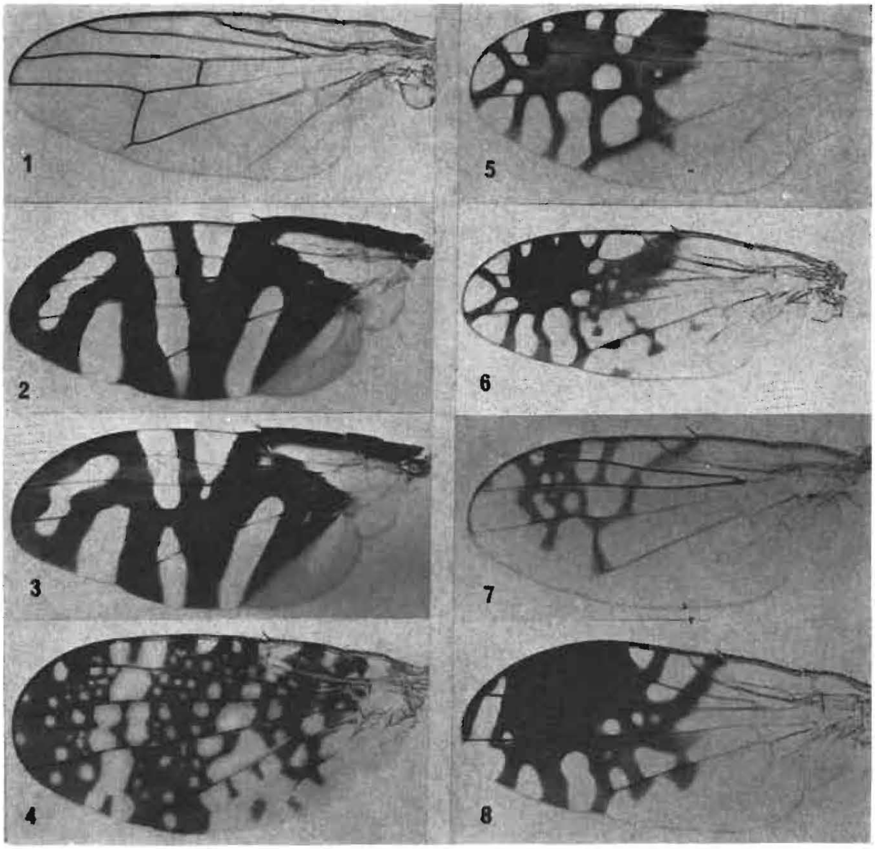
Until a revision of the genus *Urophora* is completed, it will be difficult to state the exact position of the new species among other species of the genus. Meanwhile it may be said that it seems to have affinities with species with very much reduced or completely absent wing pattern, like *U. spoliata* Haliday, *U. christophi* Loew and *U. mandschurica* Hering. But in *U. spoliata* the stigma is brown, not yellow, the oviscape is about the length of the pre-abdomen, whereas in *U. hermonis* it is twice as long. In *U. christophi* there is a distinct brown costal spot at the distal part of the wing, the legs are almost entirely yellow and the oviscape is about as long as the pre-abdomen, whereas in *U. hermonis* the distal part of the wing is, at most, infuscated and a great part of the legs is black. *U. mandschurica* is a smaller species (3,5 mm ♂ – 5,0 mm ♀) with a more angular head, entirely hyaline wings with a yellowish stigma and entirely yellow legs.

## ACIURINAE

### ***Isoconia negeviana*** spec. nov., figs 2, 3, 11, 12.

MALE. length: 4,0–5,0 mm; wing: 3,5–4,0 mm.

*Head* (fig. 11): frons yellow to reddish-brown, lunule, face and antennae yellow, arista brown; ocellar triangle, orbits, parafacials and face whitish dusted; on the border between the orbit and parafacial often a small brown spot; palps whitish, yellow at tip.



Figs 1–8. Wings of new Tephritidae. 1. *Urophora hermonis* spec. nov. 2. *Isoconia negeviana* spec. nov., var. 3. *Isoconia negeviana* spec. nov. 4. *Oxyna superflava* spec. nov. 5. *Euarestella kugleri* spec. nov. 6. *Tephritis cometa israelis* subspec. nov. 7. *Trupanea erigeroni* spec. nov. 8. *Trupanea pseudoamoena* spec. nov.

Two upper, three lower brown orbital bristles; post-ocellars, post-verticals and post-ocullars whitish-yellow; short black setulae between and below post-ocullars; genal bristle brown. l:h:w = 6,2:8,3:10,0. Frons flat, 0,4 width of head, width 0,75 length, with very few yellow hairs in front; lunule large, $\frac{1}{3}$ length of frons; face concave, epistome slightly projecting. Head in profile oval, fronto-facial angle about 135°; parafacials $\frac{1}{3}$, genae the same width of antenna; antenna as long as 0,75 face, third segment rounded at tip; arista with microscopic hairs; eyes large, height 1,7 length; proboscis and labella short; palps normal, nearly the same width throughout their whole length.

*Thorax:* dorsum black, finely greyly dusted, observed from behind, with a median and dorso-central stripes; pubescence white; bristles brown, dorso-centrals nearly on line of anterior supra-alars; humeri and notopleural lines yellow; pleura brown, very lightly dusted. Scutellum short, length half its width, with a brownish tinge; four bristles, apicals 0,6 basals. Legs: anterior femora yellow, at most outer side brown; middle and posterior femora dark brown to black; anterior and middle tibiae yellow, posterior tibiae dark brown; tarsi yellow.

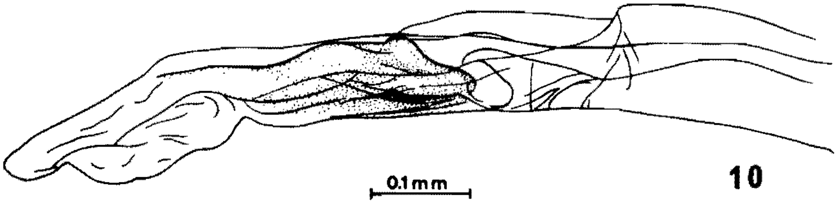
*Wings* (figs 2–3): longitudinal veins undulate; stigma 1,5 times longer than wide; discal cell widening conspicuously towards cross vein; third vein with one to three setulae at knot, one to three over first posterior cell. Pattern: the three hyaline indents of the hind margin are relatively broad and almost perpendicular, the second united with the second costal indent, forming a complete hyaline band across the wing (only one specimen shows a variety where there is a narrow black bridge in discal cell crossing this hyaline band (fig. 3)); no argents at apical part of wing, instead, a curved and elongate large hyaline band, starting below second vein, ending slightly inside second posterior cell; a small argent in first basal cell, below the first hyaline costal indent. Squamae white; base of halteres yellow, apex dark brown.

*Abdomen:* shining dark brown to black, almost without dust; pubescence brown; venter brown to black; aedeagus (fig. 12) with sclerotization, hairy brush before apex.

FEMALE. length: 5,0–6,0 mm; wing: 4,0 mm; ovipositor sheath: 1,7 mm. Sixth tergum 0,56 fifth; oviscape almost as long as pre-abdomen, 0,43 length of wing, black; pubescence brown.

MATERIAL EXAMINED. Holotype ♂, Allotype ♀ and additional 6 ♂♂ and 10 ♀♀ Wadi Faria (Jordan Valley), 26.v.1970, sweeping *Blepharis attenuata* Napper (Acanthaceae). From the same locality: 4 ♂♂ and 2 ♀♀ 21.v.1970, 5 ♂♂ 14.vii.1970, 1 ♂ 1.vi.1971. Also 1 ♂ Jericho (Dead Sea area), 16.vi.1970 and 1 ♂ Ha'Meishar (Central Negev), 20.vii.1971. Plants of *Blepharis attenuata* Napper were transferred on 26.v.1970 from Wadi Faria to the laboratory. A week later 1 ♂ and 2 ♀♀ emerged, but it was not established from which part of the plant. 1 ♂ and 2 ♀♀ Mishor Rotem (Northern Negev), 30.vi.1965, on *Blepharis* sp., leg. M. E. Kislev (Department of Botany, The Hebrew University of Jerusalem). A pair of paratypes was sent to Dr H. K. Munro in the Plant Protection Research Institute, Pretoria, South Africa, and another to Mr B. H. Cogan in the British Museum (Nat. Hist.), Entomological Department. The holotype and all other paratypes are deposited in the entomological collection of the Tel Aviv University.

This species is included in the African genus *Isoconia* (Munro, 1947) by having two upper, three lower orbitals; four scutellars; dorsum of thorax moderately dusted; lunule large, U-shaped; wing pattern Aciura-type; the costa indented over stigma; aedeagus with strong sclerotization. *I. negeviana* differs from all other species of *Isoconia* by having the large hyaline band in the apical part of the wing. In the other species the apical third of the wing is black without any hyaline spot; at most there are argents. In addition, while in the other species of *Isoconia* the black pattern is continuous, in *I. negeviana*, in all but one specimen examined the pattern is interrupted by a hyaline band, formed by the union of the second costal indent with the second indent of the hind margin. In general, the wing pattern of *I. negeviana* is more like that of *Metasphenisca* Hendel, e.g. *M. gracilipes* Loew and *M. bezziana* End. (see Munro, 1947).



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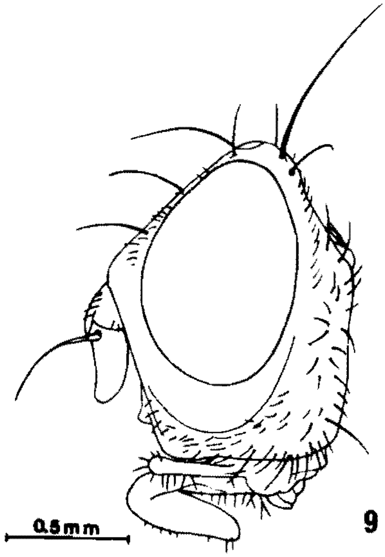

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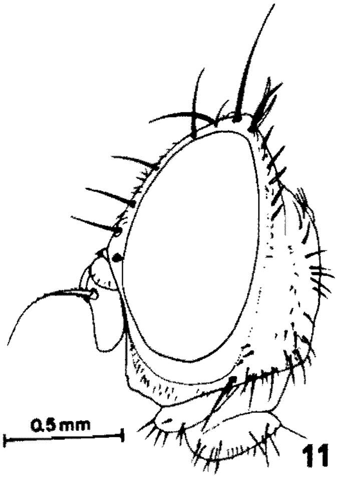

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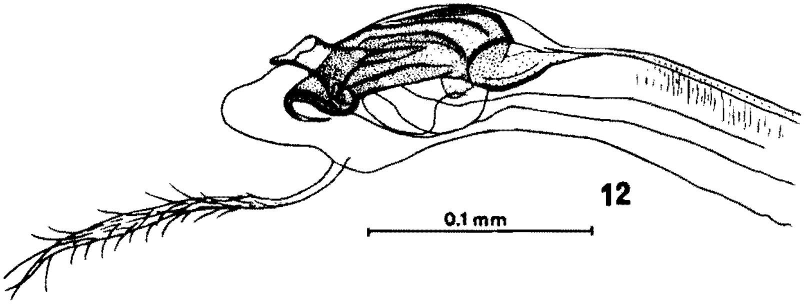

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Figs 9–12. New Tephritidae. 9–10. *Urophora hermonis* spec. nov. 9. Head, in profile. 10. Aedeagus. 11–12. *Isoconia negeviana* spec. nov. 11. Head, in profile. 12. Aedeagus.

## TEPHRITINAE

### ***Oxyna superflava*** spec. nov., figs 4, 13, 14.

MALE. length: 3,3–4,0 mm; wing: 3,2–3,5 mm.

*Head* (fig. 13): yellow, lunule, face, genae and base of palps whitish; one black lower orbital; para-frontals with coarse whitish hairs, some of which, on the lower part, are usually longer and bristle-like; among the whitish post-oculars a few brown setulae. l:h:w = 7,0:8,3:10,0; frons flat, 0,6 width of head, 3 times width of eye, length 0,9 width; face concave, epistome slightly projecting; para-facials 0,75 width of antenna, genae about ⅓ height of eye, which is small, oblique, 1,4 times higher than long; antennae short, rounded, 0,75 face; proboscis thin and long, geniculate, labella as long as length of head; palps 1,66 length of antenna, 2,5 times longer than wide, tapering towards end.

*Thorax:* dorsum golden dusted, pubescence coarse, white, bristles black, 2 pairs of dorso-centrals; pleurae yellow. Scutellum pale yellow, 2–4 bristles, apicals sometimes missing, when present, they are yellow or black in varying size, up to 0,5 length of basals. Legs: yellow. Wings (fig. 4): apical part much rounded; pattern brown, almost banded; behind line of lower cross vein an almost continuous broad hyaline band, formed by the great hyaline spots; extreme base of wing and alula completely hyaline. Squamae white, halteres yellow.

*Abdomen:* tergites black with yellow hind margins, densely greyish dusted; pubescence white, rather dense and long. Aedeagus (fig. 14): pre-aedeagal swelling with two clusters of setulae and a few rows of smaller setulae from the inner cluster up to the base of the aedeagus.

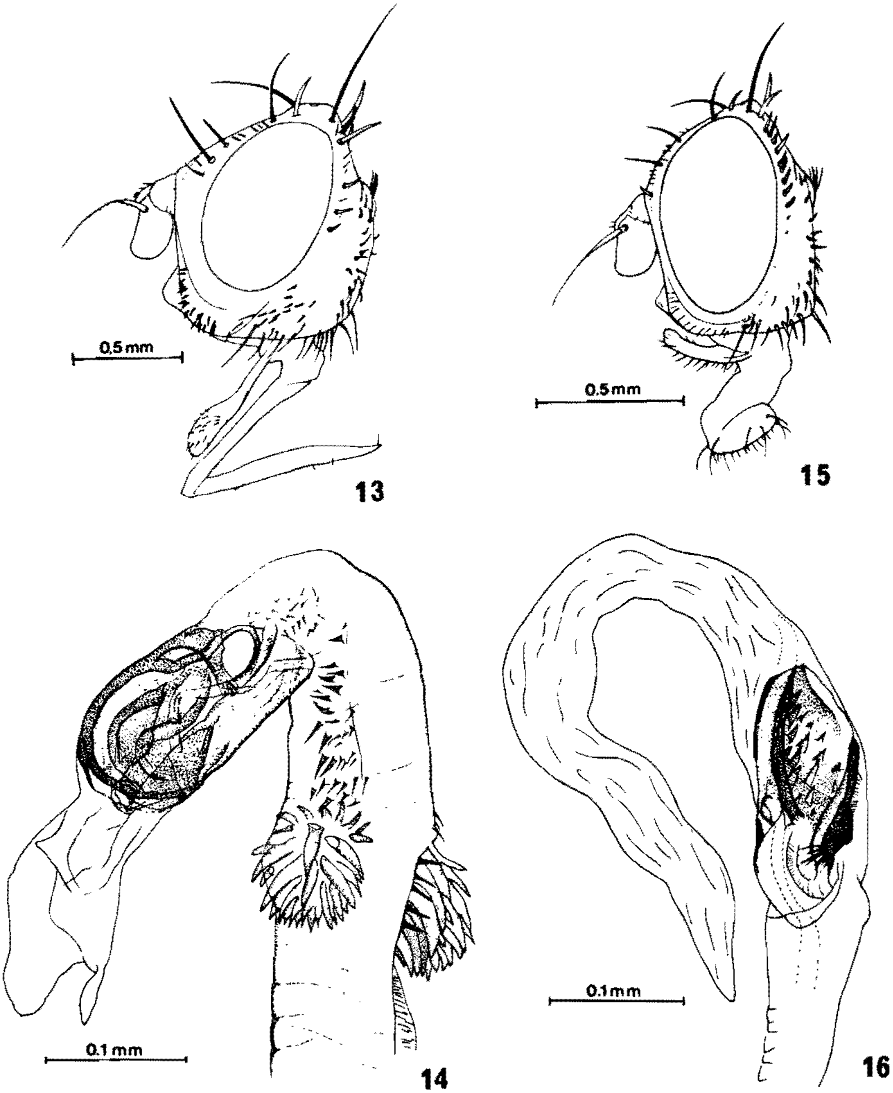
FEMALE. length: 4,0–4,5 mm; wing: 3,5–3,8 mm; ovipositor sheath: 0,9–1,2 mm. Oviscape conical in living specimens, ⅓ length of wing, ¾ length of pre-abdomen, shining reddish-yellow, darker at basal half and at tip; fine brown pubescence.

MATERIAL EXAMINED. Holotype ♂, Allotype ♀ and additional 21 ♂♂ and 27 ♀♀ Paratypes near the top of Mt. Katharina (Southern Sinai), 2 400 m, 11.vii.1969, sweeping *Achillea* sp. and other Compositae. Flies could not be found either at lower altitudes on the same mountain, or at the same altitude on adjacent Mt. Abbas. A pair of paratypes was sent to Dr H. K. Munro in the Plant Protection Research Institute, Pretoria, South Africa, and another to Mr B. H. Cogan in the British Museum (Nat. Hist.), Entomological Department. The holotype and all other paratypes are deposited in the entomological collection of the Tel Aviv University.

In Hendel's (1927) key to species of *Oxyna*, the new species keys to *O. flavipennis* Loew, having two pairs of dorso-central bristles on the dorsum. The two species may be separated by the following characters:

Palps shorter and broader, less than 2 times longer than wide; on para-frontals coarse whitish pubescence only, no distinct whitish bristles beside the one black lower orbital (seldom 2–3 black lower orbitals); apical bristles of scutellum always black; usually the female's wing pattern darker than the male's; the pattern extends to the extreme base of the wing, including the axillary lobe and the alula; the large hyaline spots, especially in the distal part of the wing, are usually well separated, hence the pattern appears less banded; larger species (4,6 mm ♂–5,2 mm ♀). Europe and as far east as Siberia. . . . . . . . **Oxyna flavipennis** Loew

Palps longer, about 2,5 times longer than wide; on para-frontals almost always distinct yellowish bristles beside the one black lower orbital; apical bristles of scutellum sometimes



Figs 13–16. New Tephritidae. 13–14. *Oxyna superflava* spec. nov. 13. Head, in profile. 14. Aedeagus. 15–16. *Euarestella kugleri* spec. nov. 15. Head, in profile. 16. Aedeagus.

yellowish and hair-like; no difference in the shade of the wing pattern between males and females; extreme base of wing and alula hyaline, axillary lobe at most with two small brown spots; the large hyaline spots are partly united to form almost complete bands; smaller species (4,0 mm ♂ –4,5 mm ♀). Sinai Mountains. . . . . . . . **Oxyna superflava** spec. nov.

## ***Euarestella kugleri*** spec. nov., figs 5, 15, 16

MALE. length: 2,5–3,5 mm; wing: 2,5–3,0 mm.

*Head* (fig. 15): whitish-yellow, lower part of frons, antennae and proboscis yellow; bristles light brown; two upper, three lower orbitals, the frontal lower orbital small and whitish. l:h:w = 5,7:7,9:10,0; frons slightly convex, width almost the same as length, 0,42 width of head, bearing a few white hairs in front; lunule moderately large, reaching or passing line of second lower orbital; antennae about 0,8 length of face, tip rounded; eyes 1,5 higher than long; proboscis and labella short.

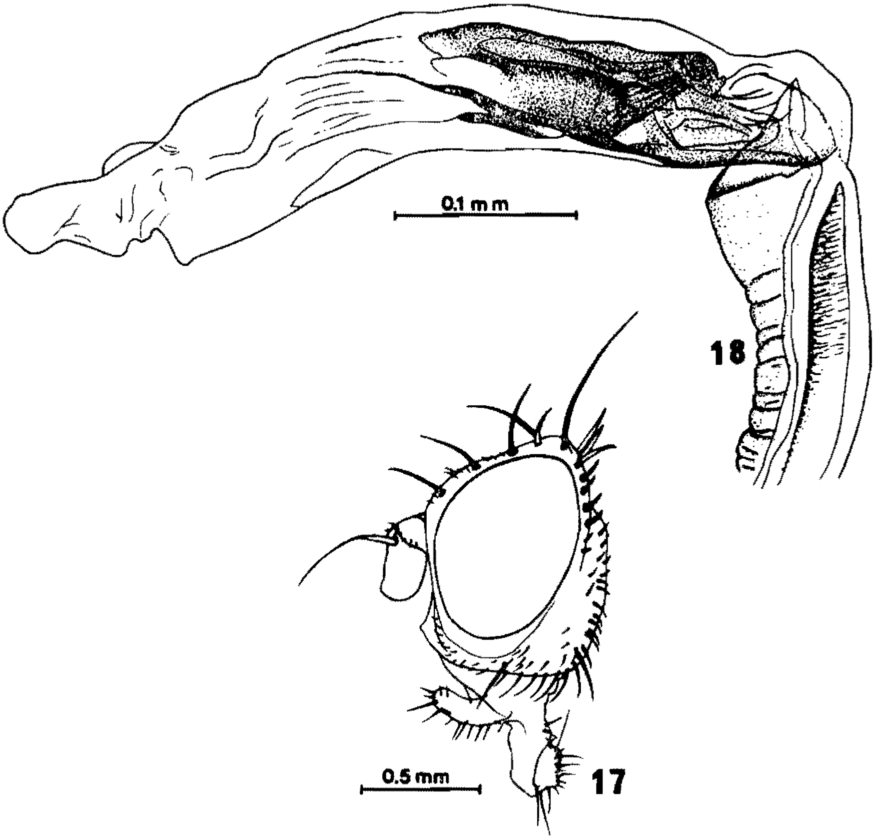
*Thorax:* ground colour black, humeri and notopleural areas yellow, dust white, pubescence whitish, bristles light brown; scutellum yellow, with two bristles. Legs: yellow. Wings (fig. 5): third vein bare. Pattern occupies the apical half of the wing, consisting of a large brown somewhat reticulate area with brown rays to wing margin; apical fork present; 3 rays reach hind margin: 2 in second posterior cell and one on lower cross vein; a bar from lower end of upper cross vein across discal cell widens towards and passes fifth vein, usually connected along this vein to ray on lower cross vein, thus enclosing a large hyaline spot at apical part of discal cell; above this spot in first posterior cell is another hyaline spot; two hyaline indents in marginal cell: the first, touching end of stigma, crosses second vein and reaches or almost reaches third vein; the second is smaller and does not cross second vein; a small hyaline spot in submarginal cell underneath the end of second vein; on the apical section of third vein, in the distal margin of the main brown area is a round, darker spot. Squamae white, halteres yellow.

*Abdomen:* slightly shining, hind and lateral margins of tergites more or less yellow, the rest black; dust golden, sparser than on thorax; pubescence whitish. Aedeagus (fig. 16) with long vescica; the sclerotized part bears teeth.

FEMALE. length: 3,0–3,5 mm; wing: 2,4 mm; ovipositor sheath: 0,8 mm.

Colour of abdomen and ovipositor sheath varies: the tergites from completely yellow to almost entirely black with hind margins more or less yellow; the ovipositor sheath—either entirely yellow or increasingly black from base to entirely black; the tip is always black. The ovipositor sheath is ⅓ length of wing and about as long as pre-abdomen.

MATERIAL EXAMINED. Holotype ♂, Allotype ♀ and 39 ♂♂ and 15 ♀♀ Paratypes on *Iphiona scabra* DC. in Elat (Southern Negev), 25.iii.1970. 3 ♂♂ and 4 ♀♀ Wadi Firan (Sinai Mountains) 25.v.1971. 3 ♀♀ from the same locality 10.iv.1973. 1 ♀ Bir Zrir (Sinai Mountains) 2.ix.1970. 1 ♀ Wadi Watir (Sinai Mountains) 6.iv.1973. 2 ♂♂ and 2 ♀♀ Wadi Nazeb (Sinai Mountains) 8.iv.1973. 3 ♂♂ Wadi Hibran (Southwestern Sinai) 11.iv.1973. 7 ♂♂ and 2 ♀♀ A-Tur (Southwestern Sinai) 12.iv.1973. 1 ♀ Sharm e'Sheikh (Southern Sinai) 17.viii.1971. 3 ♂♂ and 1 ♀ Jotveta (Arava Valley) 11.iv.1972. 4 ♂♂ and 2 ♀♀ were reared from *Iphiona scabra* DC. (Compositae) collected in Elat on 25.iii.1970; the flies emerged about a week later. Shining black puparia were found stuck among the seeds, which probably serve as the sole food of the larvae. A pair of paratypes was sent to Dr H. K. Munro in the Plant Protection Research Institute, Pretoria, South Africa, and another to Mr B. H. Cogan in the British Museum (Nat. Hist.), Entomological Depart-



Figs 17–18. *Tephritis cometa israelis* subspec. nov. 17. Head, in profile. 18. Aedeagus.

ment. The holotype and all other paratypes are deposited in the entomological collection of the Tel Aviv University.

Of the two species included by Hendel (1927) in the genus *Euarestella: E. megacephala* Loew (known only from Sicily) and *E. iphionae* Efflatoun (known from Egypt and Israel), only specimens of the latter species were available for examination. However, *E. kugleri* differs so much from the descriptions of *E. megacephala* (Loew, 1846 and 1862; Hendel, 1927), that there is no doubt that it is a different species. *E. kugleri* seems to be closer to *E. iphionae* in having a similar head shape, 3 lower orbitals and a more or less similar wing pattern. In Efflatoun's figures (1924, plate 1, figs 1, 21) 2 and 3 lower orbitals are shown. In his description (1923) he states: "inferior orbitals four, three of which being more developed than the two s.or. and the fourth is much weaker . . .", but this seems to be either a mistake or an aberration, since all 50 specimens of *E.*

*iphionae* from Israel, Sinai and Egypt, which were examined, have 3 lower orbitals. *E. kugleri* differs from *E. iphionae* by the brown, not black, wing pattern; only one bar in third posterior cell, instead of two, reaches hind margin of wing. In *E. kugleri* there are two hyaline spots in marginal cell, the one touching stigma reaches or almost reaches third vein, whereas in *E. iphionae* there is only one hyaline spot, and this does not pass second vein. In *E. kugleri* the tergites are usually black, only hind and lateral margins yellow, oviscape mostly yellow; in *E. iphionae* the abdomen is usually yellow, seldom darker, and the oviscape shining dark brown to black. According to the descriptions *E. megacephala* has a more inflated head than in the other two species, 3 or 4 lower orbitals (Loew (1862) mentions 3 lower orbitals, and Hendel's figure shows 4) and the wing pattern extends over the whole wing, whereas in the other species the basal part is hyaline.

## ***Tephritis cometa*** Loew subspec. ***israelis*** subspec. nov., figs 6, 17, 18

This subspecies is similar to the nominate form, but differs from it in the wing pattern (fig. 6) and body coloration. Apart from the black apical stellar spot, there is a paler median spot, narrowed at the costa and widening towards the fourth vein; its proximal border goes from the bend of the subcosta in a somewhat zigzag fashion through marginal, submarginal and first basal cell, to the fourth vein at a point which is in the middle of discal cell; its distal border starts on the costa in about the middle of stigma and goes to a point on the second vein which is above the upper cross vein, here it turns at an almost right angle, and touches or almost touches third vein slightly distal to upper cross vein; the median spot is united to the apical one on the third vein and also by a narrower connection on the fourth vein. The whole scutellum and a great part of the abdominal tergites are yellow. Head (fig. 17) and aedeagus (fig. 18) typical for the species.

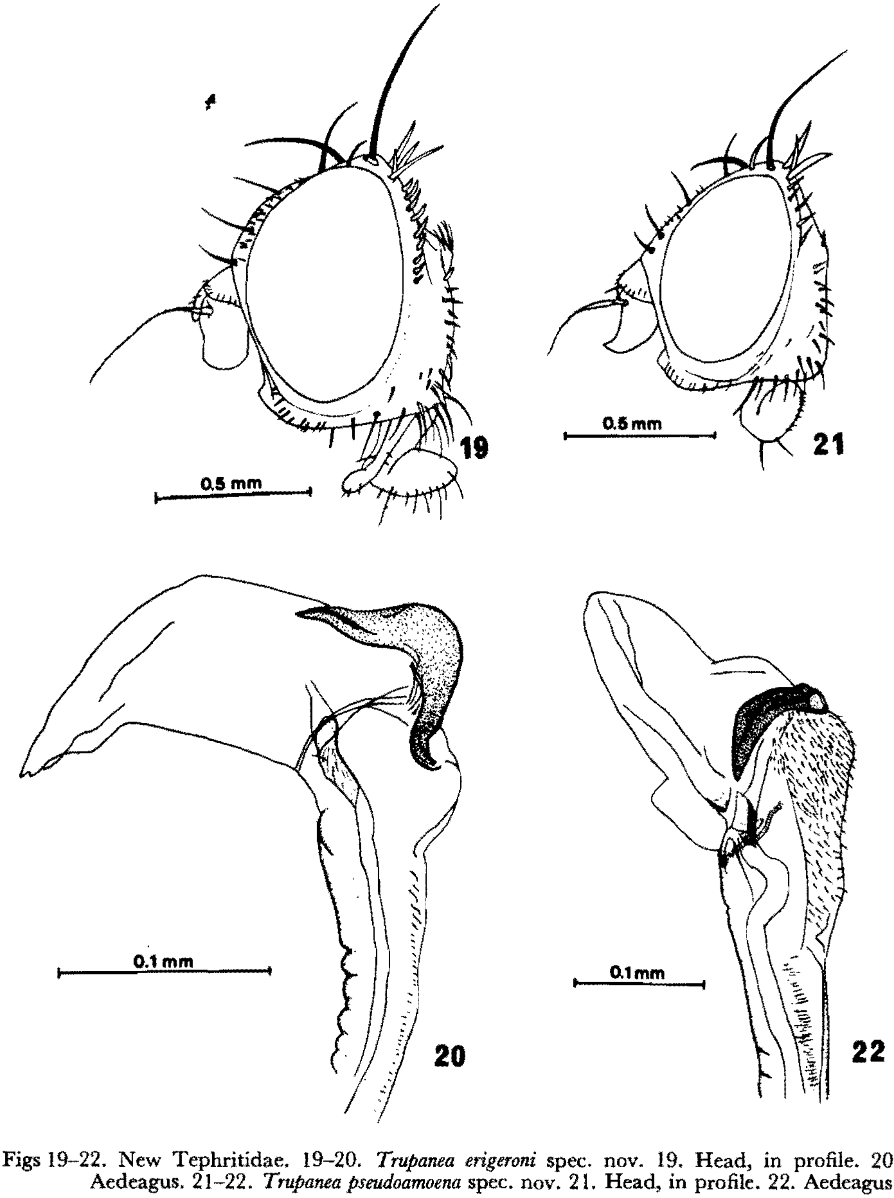
In *T. cometa cometa* the median spot is narrower, with parallel borders; its distal border does not reach upper cross vein, as a consequence there is a much larger hyaline spot between the median spot and the apical one than in *T. cometa israelis;* in the submarginal cell of *T. cometa cometa* this hyaline spot is divided into two almost equal parts by a narrow brown cross bar, whereas in *T. cometa israelis* the proximal part is represented at most by a small dot. In *T. cometa cometa* the dorsal surface of the scutellum between the bristles, and the abdominal tergites are black.

MATERIAL EXAMINED. Holotype ♂, Allotype ♀ and Paratypes 3 ♂♂, 3 ♀♀ Tel-Dan (Upper Galilee), 18.vi.1971. From flower heads of *Cirsium gaillardoti* Boiss. (Compositae) taken on the same day at the same place 5 ♂♂, 2 ♀♀ emerged during the following week. Up to 11 puparia were found in one flower head. Also 2 ♂♂, 1 ♀ at the same locality, 16.vi.1971. The holotype and all the paratypes are deposited in the entomological collection of the Tel Aviv University.

## ***Trupanea erigeroni*** spec. nov., figs 7, 19, 20

MALE. length: 2,4–3,0 mm; wing: 2,5 mm.

*Head* (fig. 19): upper part of frons, lunule and face whitish-grey, lower part of frons and antennae yellow; bristles yellow to brown, 3 lower orbitals. Frons 0,4 width of head. l:h:w = 6,1:7,3:10,0; in profile frons slightly convex, fronto-facial angle



Figs 19–22. New Tephritidae. 19–20. *Trupanea erigeroni* spec. nov. 19. Head, in profile. 20. Aedeagus. 21–22. *Trupanea pseudoamoena* spec. nov. 21. Head, in profile. 22. Aedeagus.

rounded, para-facials very narrow, about as wide as base of arista, genae ⅔ width of antenna; third segment of antenna rounded at the end or with a small point above.

*Thorax:* dorsum and scutellum very densely silver-grey dusted; pubescence white; bristles yellow to brown. Legs: yellow. Wings (fig. 7): third vein usually bare; pattern faint, rather reduced, the dark apical area reticulate with 2–9 hyaline dots and varies from specimen to specimen, sometimes even between the wings of the same fly. In second posterior cell only one short grey ray reaching the center of the cell; a ray on the entire lower cross vein and a faint zigzag bar from stigma, which meets the ray on lower cross vein at its upper end. Squamae white, halteres yellow.

*Abdomen:* ground colour black, hind margin of tergites usually yellow to a variable extent; dust silvery to golden in different view angles; pubescence white; aedeagus (fig. 20): spine strongly arched, broadest in the middle, tapering towards both ends.

FEMALE. length: 3,0–3,5 mm; wing: 2,6–3,0 mm; ovipositor sheath: 0,6 mm.

Ocellars and lower frontals usually a little stronger than in male. Ovipositor sheath shining black, covered with white hairs almost to tip, 0,5 length of pre-abdomen, 0,23 length of wing.

MATERIAL EXAMINED. Holotype ♂, Allotype ♀ and 5 ♂♂ and 7 ♀♀ Paratypes were bred from flower heads of *Erigeron bovei* (DC.) Boiss. (Compositae), collected in Ein-Gedi (Dead Sea area) on 20.ix.1971; the flies emerged during the following week. 9 ♂♂ and 17 ♀♀ were collected at the same locality on the same day. 1 ♂ and 11 ♀♀ Ein-Gedi 6.vii.1970; 5 ♂♂ and 7 ♀♀ Ein-Boqeq (Dead Sea area) 6.vii.1970; 3 ♂♂ and 1 ♀ Ein-Boqeq 15.viii.1970. The host plant. *Erigeron bovei* (DC.) Boiss. is a rare plant in Israel, restricted to banks of streams of the Dead Sea area. The larvae eat the achenes and pupate in different positions inside a space formed by the peripherial achenes together with the bracts; the floor of the cavity is the receptacle of the flower head. 1–3 puparia in one flower head. A pair of paratypes was sent to Dr H. K. Munro in the Plant Protection Research Institute, Pretoria, South Africa, and another to Mr B. H. Cogan in the British Museum (Nat. Hist.), Entomological Department. The holotype and all other paratypes are deposited in the entomological collection of the Tel Aviv University.

*T. erigeroni* belongs to the *amoena* group, as defined by Munro (1964), in having no apical rays in the wing pattern, and by having a bar from the apical spot to the stigma. It differs from the species of this group by the more reduced wing pattern; the colour of the pattern is paler, the apical spot appears reticulate because of hyaline spots and no ray reaches the hind margin of the wing. A reduced wing pattern is characteristic for species of the *stellata* group, which also lack the apical rays in the wing, but do not have a bar to stigma. The aedeagal spine ressembles that of *T. maculaminuta* Munro (of the *stellata* group) as illustrated by Munro (1964), and differs from all illustrated spines of the *amoena* group.

## ***Trupanea pseudoamoena*** spec. nov., figs 8, 21, 22

MALE. length: 2,6–3,4 mm; wing: 2,6–3,2 mm.

*Head* (fig. 21): frons, except the yellow frontal part, lunule and face whitish-grey, antennae yellow; bristles yellow, usually 3 lower orbitals, rarely 4 or 5. l:h:w = 6,3:7,3:10,0; frons 0,5 width of head; in profile fronto-facial angle prominent, frons almost straight; para-facials very narrow, about twice as wide as base of arista; genae 0,5 width of antenna, which is slightly shorter than face; third segment of antenna sickle-shaped, upper side concave, lower side convex, apex pointed upwards; in some specimens the antenna appears less pointed.

*Thorax:* dorsum densely whitish-grey dusted; humeri and notopleural area yellow; dust on pleura lighter than on dorsum; pubescence white, bristles brownish-yellow; dust, pubescence and bristles of scutellum like on dorsum; Legs: yellow. Wings (fig. 8): 0–3, usually 1–2 setulae at knot of third vein. A large dark brown rayed spot occupying more than the apical half of the wing; a heavy brown ray from stigma reaches the whole length of upper cross vein, enclosing a small hyaline spot opposite the middle of this vein, or at least reaches the lower half of this vein; usually two bars across the discal cell, reaching or crossing fifth vein; three heavy rays reach hind margin of wing; a distinct and usually isolated brown narrow band along the costa, from fourth vein almost up to the main spot, only rarely touches this spot. Squamae white, halteres yellow.

*Abdomen:* ground colour reddish to black, dust grey, pubescence yellowish-white; aedeagus (fig. 22): vescica almost triangular, spine slightly curved with a median ridge, a large pubescent area proximal to the spine.

FEMALE. length: 3,2–4,0 mm; wing: 2,8–3,3 mm; ovipositor sheath: 0,75 mm.

Ocellars and lower frontals longer than in male. Ovipositor sheath shining black, 0,5 length of pre-abdomen, the basal $\frac{1}{2}$–$\frac{3}{5}$ covered with long white hairs, the rest with short yellow-brown.

MATERIAL EXAMINED. Holotype ♂, Allotype ♀ and Paratypes: 25 ♂♂, 1 ♀ in Qeziot (Northern Negev) 1.vii.1972, sweeping *Pulicaria crispa* (Forsk.) Bth. et Hook.f. (Compositae), which is probably the food plant of this species. 1 ♂ Re'im (Northern Negev) 5.vii.1971. 1 ♀ Ramon (Central Negev) 20.vii.1971. 1 ♀ St. Katharina (Sinai Mountains) 25.v.1971. 1 ♀ Wadi A'Sheikh (Sinai Mountains) 25.v.1971. 1 ♀ Wadi Nazeb (Sinai Mountains) 8.iv.1973. 2 ♂♂ A-Tur (Southwestern Sinai) 12.iv.1973. A pair of paratypes was sent to Dr H. K. Munto in the Plant Protection Research Institute, Pretoria, South Africa, and another to Mr B. H. Cogan in the British Musem (Nat. Hist.), Entomological Department. The holotype and all other paratypes are deposited in the entomological collection of the Tel Aviv University.

*T. pseudoamoena* beongs to the *amoena* group (Munro, 1964) by having a bar to the stigma in the wing pattern and by lacking apical rays. It is close to *T. amoena* Frauenfeld, the main differences are: the colour of the dust on the dorsum is grey, in *T. amoena* brownish; the more extensive wing pattern: the ray from sigma is broad and dark and always reaches apical cross vein, in *T. amoena* this ray is narrower, faint, often broken and its end usually does not reach upper cross vein; two bars cross discal cell, whereas in *T. amoena* only one; the conspicuous isolated apical band is missing in *T. amoena* or only indicated.

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